

Work Order ID 85541

85541

Page 1

June-11-12 9:54:07 AM

Item ID: D119-646-243

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Replacement Float Skidtube w/ Training Wearplates

Stop

NS2

Start Date: 08/06/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 22/06/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: *MLJ*

Date: *12/06/11* Tooling:

Date:

Run Start

NR1

QC:

Date: SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D3905	B
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D3905-045,-13	B
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IIN-D119-646	B
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100 0.00

100

DC Memo 0.00

Document Control Photocopy bluefile & type labels per PPP D119-646-243
CHG 001

110 0.00

110

Skidtubes Memo 0.00

Skidtubes 1- Inspect Mat'l D2500-1-190 for damage

2- Ensure squareness of ends

Dec 12/06/12

N/A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Run Start

NR1

Stop

NR2

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120

Chemical Conversion Coat per QSI005 4.1

0.00

120

HandFinish

Memo

0.00

Hand Finishing

1 12-6-12

130

QC3- Inspect Part Finish

0.00

130

QC

Memo

0.00

Quality Control

① 12/06/13

150

0.00

150

Skidtubes

Memo

0.00

Skidtubes

1- Install drill jig DT9480 drill all x-bolt spacer holes using 3/16 drill

2- Scribe batch # inside aft end of tube

12/06/13

W/O:		WORK ORDER CHANGES					
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Required Date: 22/06/2012 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run Start *NR1*
	QC:	Date:	SPC (Y/N):	Date:	Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

155

0.00

155

CNC Bend 1

CNC Delta 100 Bender

Memo

0.00

1- Bend AFT end of tube using CNC Bender 1 and bend prog. D3905 AFT as per dwg D3905. Must use bending Aid DT9538, located 23.25" from Aft end.

2- Esure bending Aid DT9538 is positioned correctly, that the bender set up in on full wide and that the indexing ridge is covered with graphite grease.

DC 12/06/14

165

QC5- Inspect part completeness to step on W/O

0.00

165

QC

Memo

0.00

Quality Control

DP 12-6-14

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

180

0.00

180

Skidtubes

Skidtubes

Memo

0.00

1- Veriffy dimation of bend as per dwg D3905

2- Buff out marks left from bending.

3- Drill Aft Float bag holes using DT9493 as per dwg D3905 detail G and section F-F, open to finished size

4- Drill Aft wearplate and wearpad holes using DT9546 and DT9545 as per dwg D3905 detail G open to finished size

5- Open x-bolt spacer holes to finished size as per dwg (sections D-D and E-E)
DO NOT OPEN FWD SADDLE HOLES

6- Deburr, blow out chips from inside of tube

7-Bond web in place as per Dwg D3905 & QSI 015.

A/RSikaflex-291 121409

Sikaflex expire date: 13-4-12

Start: 12/06/18

Time: 2:30

Finish: 120621

Time: 11:00

***** (Adhere for 12 hours) *****

DC 12/06/18

- De 12/06/18

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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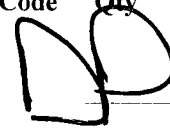

Cust Item ID:

Required Date: 22/06/2012 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date: Run Start ***NR1***
QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190 *190* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00							 12-6-19
200 *200* CNC Bend 1 GNC Delta 100 Bender	Memo 1- Bend Fwd end of tube using bender 1 and bend prog. D3905 Fwd.Use bending aid DT9544 ensure proper positioning 2- Cut Fwd end of tube as per dwg. ***VERIFY MEASUREMENT BEFORE CUTTING***	0.00 0.00							 12-6-19 PTO

W/O: 85541		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D119-646-243 PAR #: _____ Fault Category: skid tube NCR: Yes No DQA: Yes Date: 12/08/13
 Resolution: _____ Disposition: use as is QA: N/C Closed: Yes Date: 12/08/14

NCR: 12-16666		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
12/6/20	240	Forward bend is 0.5" short. Height OK	GP 12/6/20	Acceptable	<u>[Signature]</u> 12-6-20	DC 12/08/20	GP 12/6/20 DS1042	S slater

NOTE: Date & initial all entries

Work Order ID 85541

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1

Cust Item ID:

Required Date: 22/06/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

210

0.00

210

Skidtubes

Skidtubes

Memo

0.00

1- Buff out marks left from bending

2- Drill Fwd cap holes using DT8215. Open Fwd and Aft cap holes to 0.208"

3- Open Fwd saddle holes to finished size as per dwg

4- Drill Fwd x-bolt hole and open to finished size. (Holes must be laid out manually)

5- Drill towring hole and open to finished size. (Holes must be laid out manually)

6- Open Aft float holes 0.391" as per dwg D3905 detail G and section F-F

7- Deburr, blow out chips from inside of tube.

1 0 CF 12.6.20

220

QC5- Inspect part completeness to step on W/O

0.00

220

QC

Memo

0.00

Quality Control

1 0 BE 12/06/20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Required Date: 22/06/2012 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***
Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
224		0.00							

224

Skidtubes

Skidtubes

Memo

0.00

1- Countersink x-bolt holes as per dwg

2- Remove alodine prepare for welding

3- Insert x-bolt spacers

4- Weld x-bolt spacer as per dwg

A/R Alum rod Batch: M122130

5- Grind welds flush as per dwg

6- Counter bore x-bolt holes as per dwg

7- Deburr

> CF 12-6-20

3 BE12-0620

225

QC5- Inspect part completeness to step on W/O

0.00

225

QC

Memo

0.00

Quality Control

1 / 12 06 21

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

226

QC10- Inspect visual per QSI004- ground welds

0.00

226

QC

Memo

0.00

Quality Control

QC 12-06-22

227

Pressure Wash per QSI005 4.3

0.00

227

HandFinish

Memo

0.00

Hand Finishing

1 HG 12-6-22

240

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

240

Powdercoat

Memo

0.00

Powder Coating

*11h25
320°F
11h55'*

1 8 (21) 12/06/25

M120222

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

270

0.00

270

HandFinish

0.00

Hand Finishing

Memo

1-Install wearpads, gaskets and wearplates as per Dwg D3905. Put sikaflex in insert before installing bolts and washers
A/RSikaflex-240/-291 12/4/09
Sikaflex expire date: 12/07

2- install plugs assembly as per dwg.

3 -Inspect for foreign objects as per QSI 024

4 -Install Aft Cap and seal with Sikaflex. Clean excess adhesive.

A/RSikaflex-240/-291 12/4/09
Sikaflex expire date: 12/07

1 ~~2~~ (2) 12/08/09

280

QC5- Inspect part completeness to step on W/O

0.00

280

QC

Memo

0.00

Quality Control



12/08/09

W/O:		WORK ORDER CHANGES					
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Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

285

Wing Walk as per dwg QSI005 4.4 Batch 121613

0.00

285

HandFinish

Memo

0.00

Hand Finishing

14-11-12 11:08/03

286

QC3- Inspect Part Finish

0.00

286

QC

Memo

0.00

Quality Control

DAS 15 2108/13

290

Identify as per dwg & Stock Location: 87041

0.00

290

Packaging

Memo

0.00

Packaging

PAP

11/2/13 ①

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Date:

Run Start *NR1*

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Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

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Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

300

QC21- Final Inspection - Work Order Release

0.00

300

QC

Memo

0.00

Quality Control

12/8/08
MLJ 12/08/08

W/O:		WORK ORDER CHANGES					
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Picklist Print

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Page 1

Work Order ID: 85541

85541

Parent Item: D119-646-243

D119-646-243

Parent Item Name: Replacement Float Skidtube w/ Training Wearplates

Start Date: 08/06/2012

Required Date: 22/06/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP RevA: New issue DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2500-1-190

Manufactured

No

110

Each

85.0000

1

1

D2500-1-190

Ext'n - 1" Beam Tube 4"

**

De 12/06/12

Location

Loc Qty

Loc Code

HALL

85

74777

12

80061

73

D3885-3

Manufactured

No

170

Each

10.0000

1

1

D3885-3

Standard Web

**

De 12/06/18

Location

Loc Qty

Loc Code

LG

10

52425

10

D3903-1

Manufactured

No

190

Each

70.0000

12

12

D3903-1

Spacer

**

BE 12/06/21

Location

Loc Qty

Loc Code

LG

40

74876

40

LG001

30

78790

30

4

8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Start Date: 08/06/2012

Required Date: 22/06/2012

Start Qty: 1.00

Required Qty: 1.00

D3681-1

Manufactured No

190

Each

53.0000

8

8

D3681-1

Spacer

**

DE 07/06/12

Location

Loc Qty

Loc Code

LG

43

80361

1

84053

42

LG001

10

68958

2

69893

2

71845

2

74874

1

76004

1

77501

2

[Handwritten signature]

H 8

D3683-3

Purchased No

250

Each

586.0000

12

12

D3683-3

Insert

**

12 12/06/12

Location

Loc Qty

Loc Code

FP002

26

47805 ✓

26

ST060

560

47805

560

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

June-11-12 9:54:11 AM

Page 3

Work Order ID: 85541

85541

Parent Item: D119-646-243

D119-646-243

Parent Item Name: Replacement Float Skidtube w/ Training Wearplates

Start Date: 08/06/2012

Required Date: 22/06/2012

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-130

Purchased

No

250

Each

1,973.000

10

10

AI S4-1032-130

Insert

**

10

28

12/06/27

Location

Loc Qty

Loc Code

ST280

205

119084

116

120671

89

ST281

44

120807

36

120837

8

ST282

1724

121269 ✓

1724

D2855-3

Manufactured

No

270

Each

22.0000

2

2

D2855-3

Cap

**

2

28

12/06/27

Location

Loc Qty

Loc Code

FP002

22

52281

7

75080 ✓

15

D3672-1

Manufactured

No

270

Each

1,530.000

4

4

D3672-1

Phenolic Washer

**

7

28

12/06/27

Location

Loc Qty

Loc Code

ST060

1530

72229

4

76277

20

80369 ✓

496

83608

500

85222

510

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 4

Work Order ID: 85541

85541

Parent Item: D119-646-243

D119-646-243

Parent Item Name: Replacement Float Skidtube w/ Training Wearplates

Start Date: 08/06/2012

Required Date: 22/06/2012

Start Qty: 1.00

Required Qty: 1.00

D3846-1 Manufactured No 270 Each 36.0000 1 1

D3846-1

GASKET

**

1 (SP) 12/06/27

Location

Loc Qty

Loc Code

FP002

36

51827

4

53735 ✓

32

D3846-11 Manufactured No 270 Each 13.0000 1 1

D3846-11

GASKET

**

1 (SP) 12/06/27

Location

Loc Qty

Loc Code

FP002

13

51833 ✓

13

D3847-1 Manufactured No 270 Each 11.0000 1 1

D3847-1

WEARPAD

**

1 (SP) 12/06/27

Location

Loc Qty

Loc Code

FP002

11

51824 ✓

11

D3847-11 Manufactured No 270 Each 15.0000 1 1

D3847-11

WEARPAD

**

1 (SP) 12/06/27

Location

Loc Qty

Loc Code

FP002

15

51823 ✓

15

D3849-047 Manufactured No 270 Each 0.0000 1 1

D3849-047

WEARPLATE

**

1 (SP) 12/06/27

85543

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Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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NOTE: Date & initial all entries

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Page 5

Work Order ID: 85541

85541

Parent Item: D119-646-243

D119-646-243

Parent Item Name: Replacement Float Skidtube w/ Training Wearplates

Start Date: 08/06/2012

Required Date: 22/06/2012

Start Qty: 1.00

Required Qty: 1.00

D3849-045

Manufactured No

270

Each

0.0000

1

1

D3849-045

AFT WEARPLATE ASSY, FLOAT GEAR

D3904-1

Manufactured No

270

Each

177.0000

16

16

D3904-1

Washer

85542 ✓

**

1

(2P)

12/06/27

**

16

(2P)

12/06/27

Location

Loc Qty

Loc Code

ST068

177

51875 ✓

177

D3672-3

Manufactured No

270

Each

583.0000

12

12

D3672-3

Phenolic Washer

**

12

(2P)

12/06/27

Location

Loc Qty

Loc Code

ST060

583

84361 ✓

583

AN3C5A

Purchased No

270

Each

1,274.000

14

14

AN3C5A

Bolt

**

14

(2P)

12/06/27

Location

Loc Qty

Loc Code

FP001

7

115835

7

ST350

1267

116419

28

117343

13

117764

7

117872

2

119749

23

120423

28

121068

12

121255 ✓

500

121444

154

121708

500

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Page 5

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 6

Work Order ID: 85541

85541

Parent Item: D119-646-243

D119-646-243

Parent Item Name: Replacement Float Skidtube w/ Training Wearplates

Start Date: 08/06/2012

Required Date: 22/06/2012

Start Qty: 1.00

Required Qty: 1.00

AN3C46A Purchased No 270 Each 43.0000 4 4

AN3C46A

BOLT

**

4 (28) 12/06/27

Location

Loc Qty

Loc Code

ST355

43

120447 ✓

43

AN960C10L * NAS1149C0332 ✓ Purchased

No

270 Each 21.0000

10
14

10 14

*AN960C10I *

washer

**

14 (28) 12/06/27

Location

Loc Qty

Loc Code

ST

21

107534

21

AN960C416 * NAS1149C0463 ✓ Purchased

No

270 Each 0.0000

12

12

AN960C416

washer

**

12 (28) 12/06/27

MS21043-3 Purchased

No

270 Each 1,439.000

8

8

MS21043-3

Nut

**

8 (28) 12/06/27

Location

Loc Qty

Loc Code

FG

72

103691

72

ST301

1367

118077

2

118614

51

118686

30

119758

20

121255

270

121708 ✓

994

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Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 7

Work Order ID: 85541

85541

Parent Item: D119-646-243

D119-646-243

Parent Item Name: Replacement Float Skidtube w/ Training Wearplates

Start Date: 08/06/2012

Required Date: 22/06/2012

Start Qty: 1.00

Required Qty: 1.00

MS27039C4-08

Purchased

No

270

Each

98.0000

12

12

MS27039C4-08

SCREW

**

12 (20) 12/06/27

Location

Loc Qty

Loc Code

FP002

7

17831

7

ST293

91

114721 ✓

91

AN3C50A

Purchased

No

270

Each

78.0000

4

4

AN3C50A

Bolt

**

4 (20) 12/06/27

Location

Loc Qty

Loc Code

ST355

78

112761

20

114442 ✓

33

120447

25

D3411-3

Manufactured

No

270

Each

58.0000

16

16

D3411-3

WASHER

**

16 (20) 12/06/27

Location

Loc Qty

Loc Code

ST042

58

51635

17

55317 ✓

41

86318 ✓

10
6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

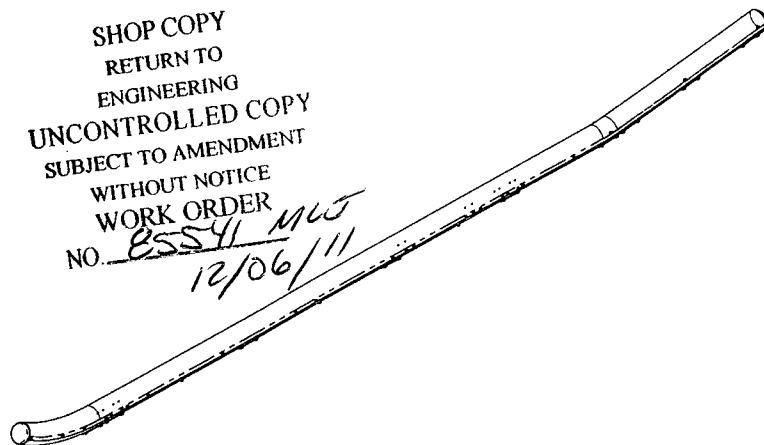
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 85541 MJS
12/06/11



D3905-041 FLOAT SKIDTUBE ASSY WITH WEARPAD (SHOWN)
D3905-043 FLOAT SKIDTUBE ASSY WITH WEARPLATE (SIMILAR)
D3905-045 FLOAT SKIDTUBE ASSY WITH TRAINING WEARPLATE (SIMILAR)

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSERTING D3885-3 FLOAT WEB
POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D3905-041 = 40.7 lbs
D3905-043 = 47.0 lbs
D3905-045 = 47.3 lbs
- 8) WELD PER DART QSI 004
- 9) DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 8.5 INCHES
ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP 0.020" DEEP IN THE BENT
PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT
PORTION OF THE TUBE.
- 10) INSERT D3885-3 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE
WITH SIKAFLEX-241/291 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP
- 11) INSERT D3492-045 PLUG ASSY INTO Ø0.197 HOLES (BOTH SIDES OF TUBE)
- 12) USE DART DRILL TEMPLATE DT8932 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARPLATE INSERTS.
INSTALL AELS-1032-130 INTO D3905-11 ONLY. INSTALL AN3C5A BOLTS AND NAS1149C0332R WASHERS
WITH SIKAFLEX-241/291.

ITEM	QTY -041	QTY -043	QTY -045	P/N	DESCRIPTION
1	X			D3905-041	FLOAT SKIDTUBE ASSY WITH WEARPAD
2		X		D3905-043	FLOAT SKIDTUBE ASSY WITH WEARPLATE
3			X	D3905-045	FLOAT SKIDTUBE ASSY WITH TRAINING WEARPLATE
11	2	2	2	D2855-3	CAP
12	16	16		D3492-045	PLUG ASSY
13	4	4	4	D3672-1	PHENOLIC WASHER
14	8	8	8	D3681-1	SPACER
15	8	1	1	D3846-1	GASKET
16	1	1	1	D3846-11	GASKET
17	8	8	1	D3847-1	WEARPAD
18	1	1	1	D3847-11	WEARPAD
19		1		D3847-043	FWD WEARPLATE ASSY
20		1		D3847-045	CENTER WEARPLATE ASSY
21		1		D3847-049	AFT WEARPLATE ASSY
22			1	D3849-047	FWD WEARPLATE ASSY
23			1	D3849-045	AFT WEARPLATE ASSY
24	1	1	1	D3885-3	FLOAT WEB
25	1	1		D3905-11	FLOAT SKIDTUBE
26			1	D3905-13	FLOAT SKIDTUBE
27	12	12	12	D3903-1	SPACER
28			16	D3904-1	WASHER
29	12	12	12	D3672-3	WASHER
30	12	12	12	D3683-3	INSERT
31			16	D3411-3	WASHER
41	42	42	10	ALS4-1032-130	INSERT
42	46	46	14	AN3C5A	BOLT
43			4	AN3C48A	BOLT
44			4	AN3C50A	BOLT
45	46	46	10	NAS1149C0332R	WASHER (OR AN960C10L)
46	12	12	12	NAS1149C0463R	WASHER (OR AN960C416)
47			8	MS21043-3	NUT
48	12	12	12	MS27039C4-08	SCREW

RELEASED
12/15/11

B	REVISED PART LIST: ALS4-1032-130 WAS AELS-1032-130 (ZN A6-5, A5-6, C5-7, C3-7, A5-7); ADD DT8932 (ZN A8-1); D2855-3 WAS D2575 (ZN C8-2, C1-2, C8-3, C1-3, C8-4, C1-4); AN3C5A WAS AN9C4A (ZN C7-2, C1-2, C7-3, C1-3, C7-4, C1-4); D3849-047 WAS D3849-041 (ZN B3-4); ADD D3411-3 (ZN B3-4); ADD AN3C50A (ZN B3-4); Ø0.313 WAS Ø0.328 (B2-5, B2-6, C2-7, A8-7 & D7-8); REVISED NOTE 14 (ZN A8-7)	RF	09.06.30
A	NEW ISSUE	RF	09.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED	AS	DRAWING NO.	REV. B
MFG. APPR.	MP	D3905	SHEET 1 OF 8
APPROVED	MP	TITLE	SCALE
DE APPR.	MP	A119 FLOAT SKIDTUBE ASSY	NTS
DATE	09.06.30	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUBJECT TO THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

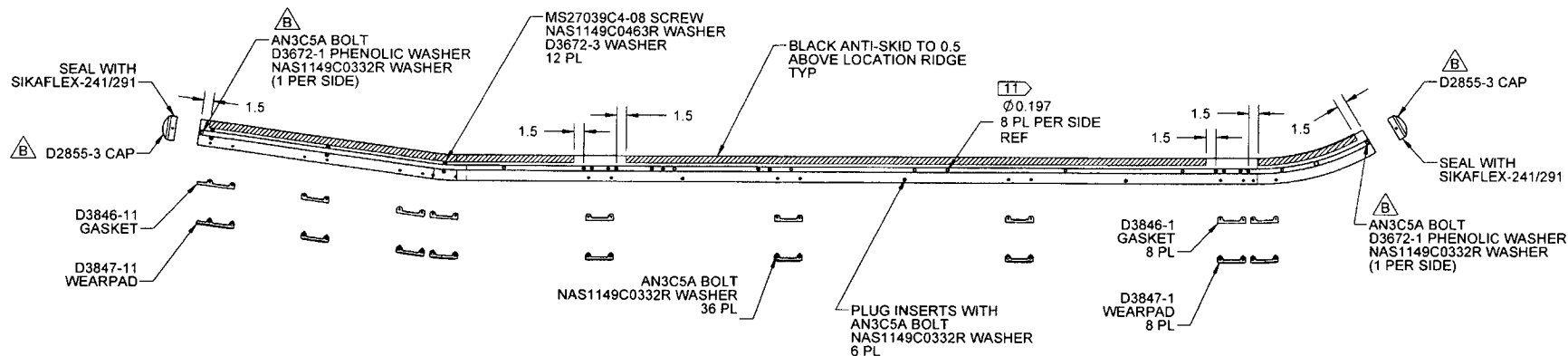
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

85541



D3905-041 FLOAT SKIDTUBE ASSY WITH WEARPAD
(MAKE FROM D3905-11 SKIDTUBE)

RELEASED
07/07/15

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.		D3905	SHEET 2 OF 8
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DE APPR.		A119 FLOAT SKIDTUBE ASSY	NTS
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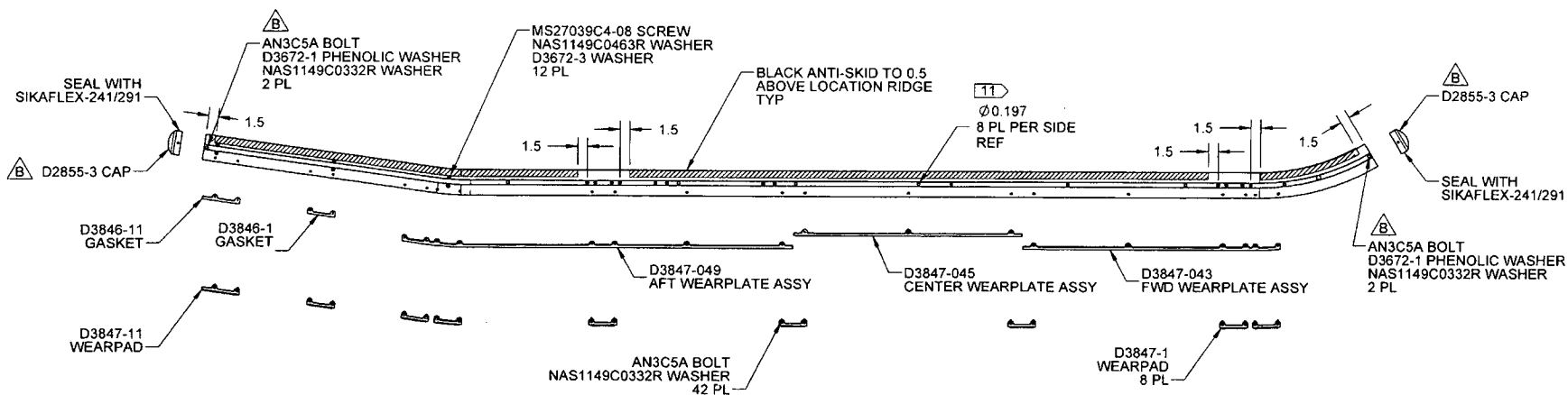
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____




NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3905-043 FLOAT SKIDTUBE ASSY WITH WEARPLATE
(MAKE FROM D3905-11 SKIDTUBE)

RELEASED
09/07/15

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MFG. APPR.		D3905	SHEET 3 OF 8
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

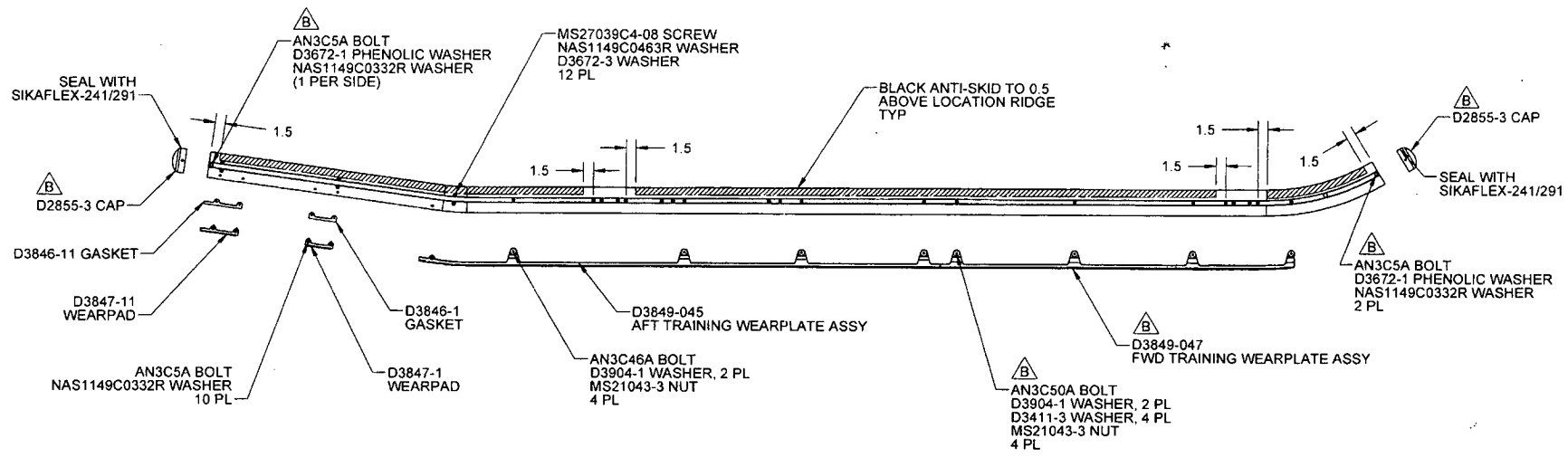
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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D3905-045 FLOAT SKIDTUBE ASSY WITH TRAINING WEARPLATE
(MAKE FROM D3905-13 SKIDTUBE)

RELEASED
09/07/15

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CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.	RF	D3905	SHEET 4 OF 8
APPROVED	RF	TITLE	SCALE
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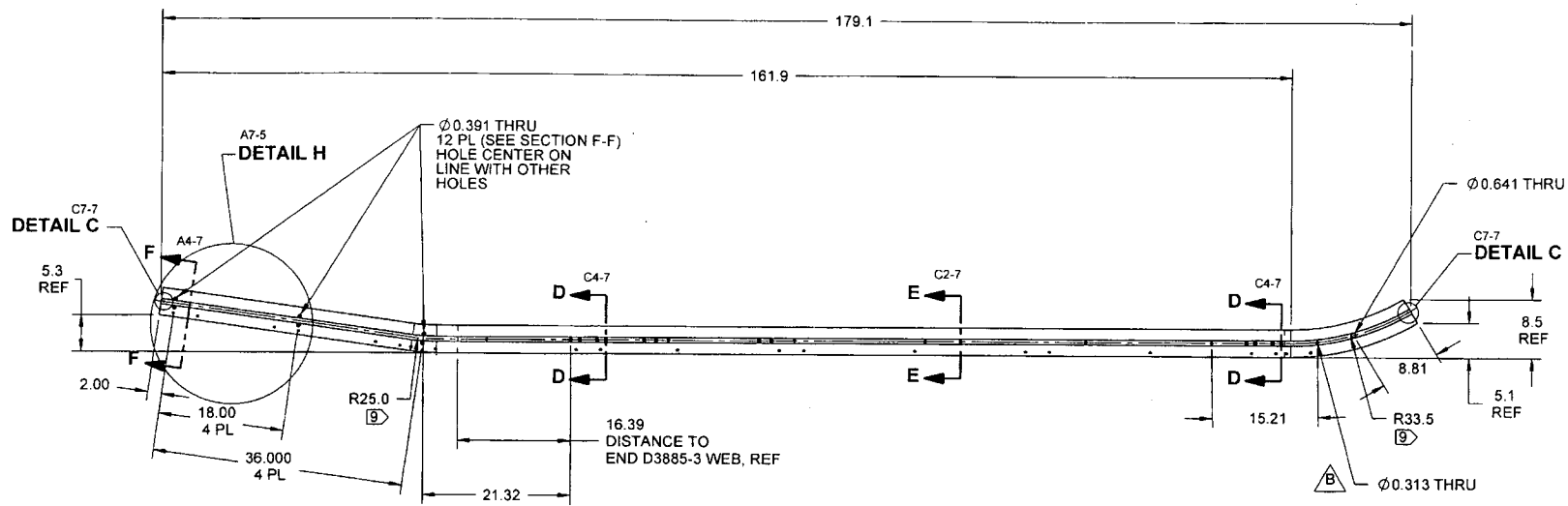
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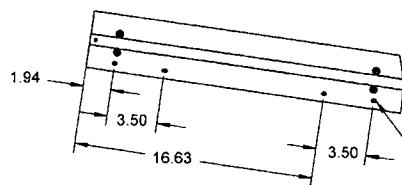
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3905-11 FLOAT SKIDTUBE
(MAKE FROM D3905-1 TUBE)



DETAIL H
SCALE 2X C7-5

DRILL Ø 0.297
INSTALL ALS4-1032-130 INSERT
AFTER FINISH, SEE SECTION F-F
TYP, 2 PL

RELEASED
09/07/15

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MFG. APPR.	RF	SHEET 5 OF 8	
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	A119 FLOAT SKIDTUBE ASSY	
DATE	09.06.30	NTS	

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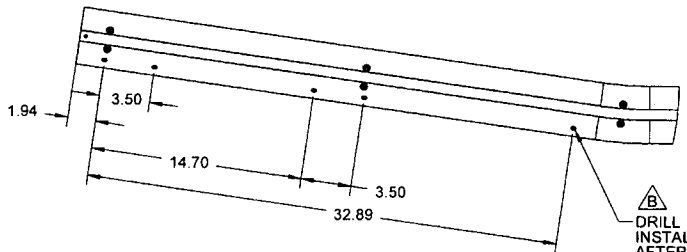
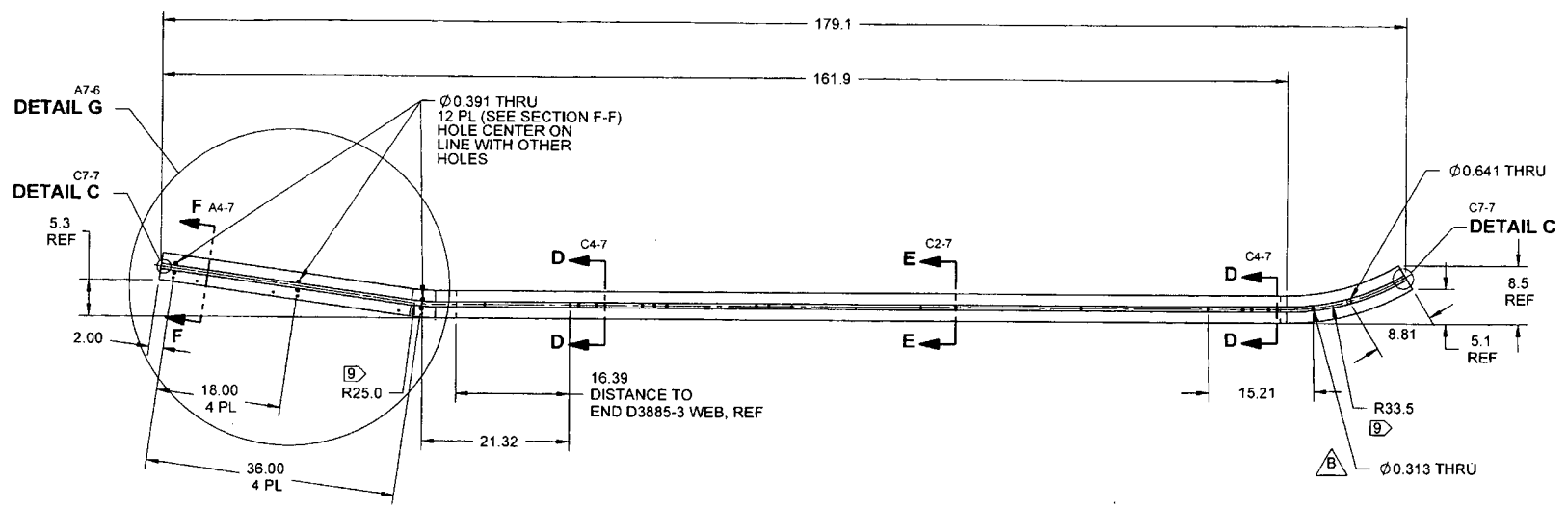
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

25541



D3905-13 FLOAT SKIDTUBE
(MAKE FROM D3905-1 TUBE)

RELEASED
29/07/15

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED	<i>RF</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>RF</i>	D3905	SHEET 6 OF 8
APPROVED	<i>RF</i>	TITLE	SCALE
DE APPR.	<i>RF</i>	A119 FLOAT SKIDTUBE ASSY	NTS
DATE	09.06.30	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. <small>THIS DOCUMENT IS UNCLASSIFIED AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

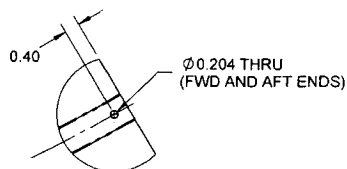
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

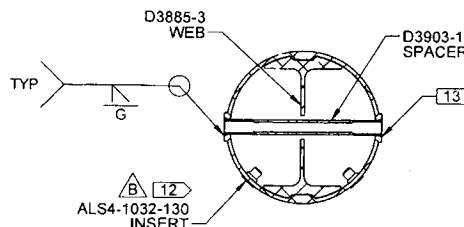
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

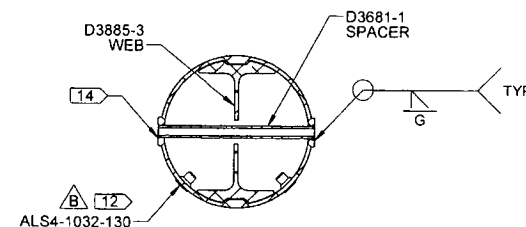
NOTE: Date & initial all entries



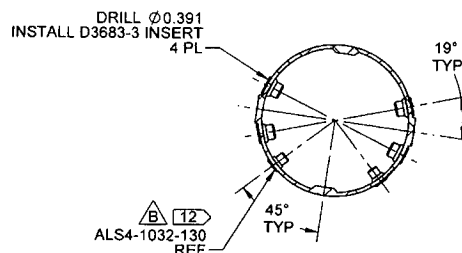
DETAIL C
SCALE 4X
C1-5
C8-5
C8-6
C1-6



SECTION D-D
SCALE 4X
(FOR 12 x $\phi 0.375$ HOLES
PER SKIDTUBE)
C5-5
C2-5
C5-6
C2-6



SECTION E-E
SCALE 4X
(FOR 8 x $\phi 0.313$ HOLES
PER SKIDTUBE)
C4-5
C4-6
B




SECTION F-F
SCALE 4X
C7-6
C7-5

NOTES:

- 13) AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR $\phi 0.375$ HOLES ONLY:
i) CHAMFER HOLES $\phi 0.475 \times 45^\circ$ (BOTH SIDES)
ii) INSERT D3903-1 SPACER
iii) WELD INTO PLACE AND GRIND FLUSH
iv) C'BORE TO 0.313×0.75 DEEP
v) DEBURR HOLES

- 14) AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR $\phi 0.313$ HOLES ONLY:
vi) CHAMFER HOLES $\phi 0.354 \times 45^\circ$ OR 0.050 DEEP $\times 45^\circ$ (BOTH SIDES)
vii) INSERT D3681-1 SPACER
viii) WELD INTO PLACE AND GRIND FLUSH
ix) DEBURR HOLES

RELEASED
02/15/10

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.		D3905	SHEET 7 OF 8
APPROVED		TITLE	SCALE
DE APPR.		A119 FLOAT SKIDTUBE ASSY	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty		

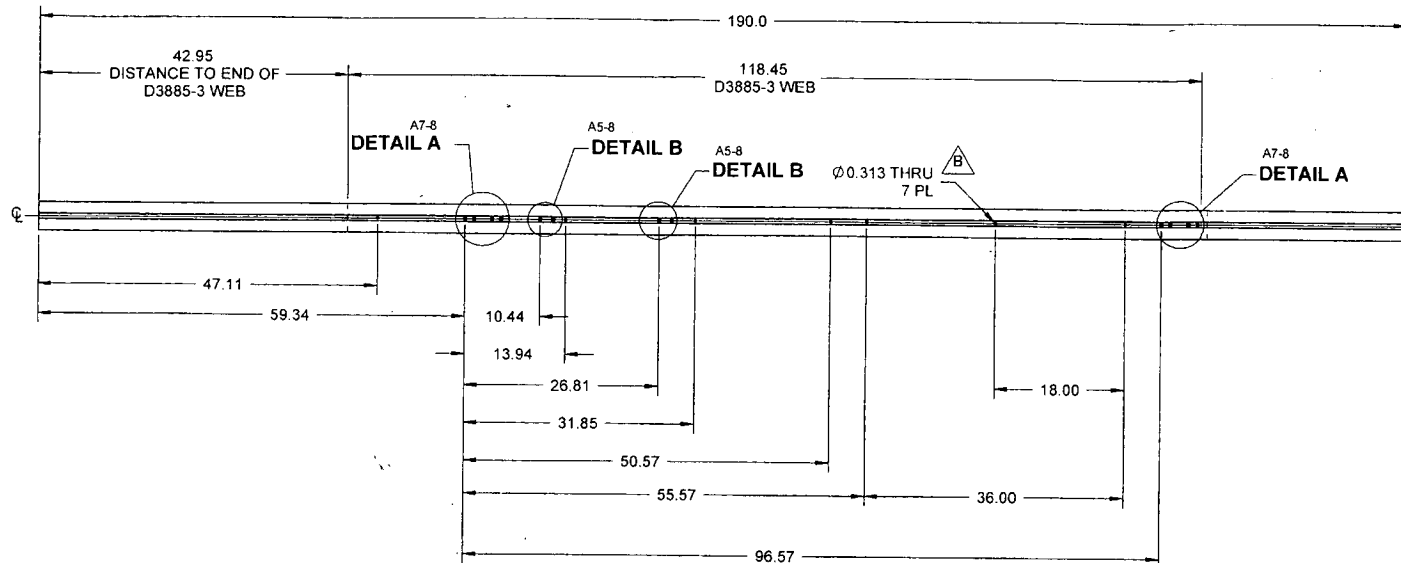
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

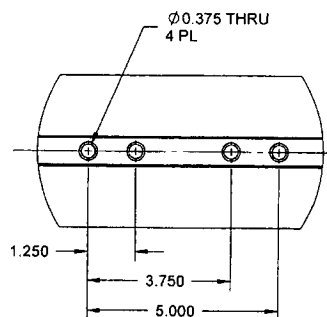
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

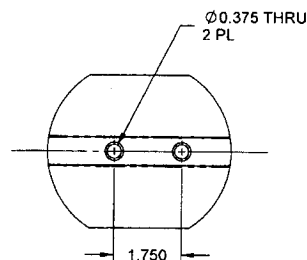
25541



D3905-1 TUBE
(MAKE FROM D2500-1-190 EXTRUSION)



DETAIL A
SCALE 4X
D6-8
D2-8



DETAIL B
SCALE 4X
D5-8
D4-8

RELEASED
01/07/15

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.		D3905	SHEET 8 OF 8
APPROVED		TITLE	SCALE
DE APPR.		A119 FLOAT SKIDTUBE ASSY	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	App Chief Prod M	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries